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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,034	09/11/2003	Cary Lee Bates	ROC920030168US1	5835

7590	06/23/2006		EXAMINER

Grant A. Johnson
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INGBERG, TODD D

ART UNIT	PAPER NUMBER
2193	

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/660,034	BATES ET AL.
	Examiner	Art Unit	
	Todd Ingberg	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>11 September 2003</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-21</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-21</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>9/11/2003</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claims 1 – 21 have been examined.

Drawings

1.   Figure 1 should be designated by a legend such as --Prior Art-- because only that which

is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR

1.121(d) are required in reply to the Office action to avoid abandonment of the application. The

replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR

1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted

by the examiner, the applicant will be notified and informed of any required corrective action in

the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2.   The Title and Abstract are under objection because legal words like "method", "system"

and "Computer program product" should not be present.

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

Claims 1 - 21 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. The current focus of the Patent Office in regard to

statutory inventions under 35 U.S.C. § 101 for method claims and claims that recite a judicial

exception (software) is that the claimed invention recite a practical application. Practical

application can be provided by a physical transformation or a useful, concrete and tangible

result. No physical transformation is recited and additionally, the final result of the claim is

to debugging and has display capabilities which is not a tangible result because not results

are displayed, updated or written to a computer readable medium. The following link on the

World Wide Web is for the United States Patent And Trademark Office (USPTO) policy on

35 U.S.C. §101.

<http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf>

For Example, Claim 1 has the ability to display but is not claiming displaying the result.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5.   Claims 1- 21 are rejected under 35 U.S.C. 102(b) as being anticipated by "How

Debuggers Work", by Jonathan B. Rosenberg published 1996 (**Dbug**).

Claim 1
Dbug anticipates an apparatus for implementing enhanced graphical user interface functions in a
graphical debugger (Dbug, page 22 – 32, Figures show enhanced GUI) comprising:
         a user interface for operatively controlling a graphical user interface (Dbug, pages 22-32,
the ability to perform operations such as disassembly view on page 29) ;
         a loadmap display manager coupled to said user interface for implementing a loadmap
function (Dbug, page 236, anticipates debugging object oriented code – Page 2 of Applicant's
Specification loadmap is Admitted prior art as part of object oriented debugging and Debug,
page 81);
         said user interface responsive to said loadmap display manager for displaying a program
loadmap (Dbug, page 94, JAVA debugging);
         a custom record display manager coupled to said user interface receiving user inputs and
implementing a custom record display function (Dbug, page 22 – 32, Figures show enhanced
GUI);
         said user interface responsive to said custom record display manager
for displaying user selected customized records (Dbug, pages 22-32, the ability to perform
operations such as Inspector on page 32).

Claim 2
Apparatus for implementing enhanced graphical user interface functions as recited in claim 1 further includes a debugger server and wherein said loadmap display manager operatively controls said debugger server for implementing said loadmap function. (Dbug, pages 195 – top of 198, remote debugging - page 197 for server specifically).

Claim 3
Apparatus for implementing enhanced graphical user interface functions as recited in claim 2 wherein said load map function includes debugger means for reading debug data for a program under debug (As per claim 1); examining the program debug data, for generating a list of each source and disassembly file contained in the program under debug (as per claim 1 – disassembly example), **and for generating a list of each object** (As per claim 1 – JAVA example) **or** archive program bound to the program under debug at run time to generate said program loadmap for display.
<u>Examiner Note</u>
Examiner notes the OR in the limitations and has selected the bolded limitation.

Claim 4
Apparatus for implementing enhanced graphical user interface functions as recited in claim 3 wherein said load map function further includes debugger means for identifying program load and unload events, and for dynamically updating said program loadmap for display as loadmap information changes responsive to program load and unload events (As per claim 1)
; whereby said program loadmap enables setting a breakpoint within a user selected address range for one instance of a source file, without setting the breakpoint in other instances of the source file (Dbug, Multithreaded Debugging in Chapter 9. And isolating specific threads on page 182 and Breakpointing on page 184)

Claim 5
Apparatus for implementing enhanced graphical user interface functions as recited in claim 2 wherein said custom record display manager operatively controls said debugger server for implementing said custom record display function (as per claims 1 and 2); and said custom record display function includes debugger means for identifying a user selected variable (Dbug, page 32, Inspector – single variable), and user selected fields of the variable to be displayed (Dbug, page 32, Inspector – multiple as in display)

Claim 6
Apparatus for implementing enhanced graphical user interface functions as recited in claim 5 wherein said custom record display function further includes debugger means for identifying a user selected all variables of this type to be customized (Dbug, page 130, watchpoints), for creating a custom record with the user selected fields and for adding said created custom record to a custom type list for displaying user selected customized records for all variables of this type only with the user selected fields (Dbug, Chapter 6, page 108 – 110).

Claim 7
Apparatus for implementing enhanced graphical user interface functions as recited in claim 5 wherein said custom record display function further includes debugger means for creating a custom record with the user selected fields and for adding said created custom record to a variables list for displaying the variable only with the user selected fields. As per claim 5.

Claim 8
A debugger computer program product for implementing enhanced graphical user interface functions in a computer system, said debugger computer program product including instructions executed by the computer system to cause the computer system to perform the steps of:
    reading debug data for a program under debug;
    examining said program debug data, generating a list of each source (Dbug, pages 12 – 14) and disassembly file contained in the program under debug (Dbug, pages 29 and 146), and **generating a list of each object** (As per claim 3) **or** archive program bound to the program under debug at run time to generate said program loadmap for display; and
displaying said generated program loadmap on a graphical user interface (as Per claim 1).
Examiner Note
Examiner notes the OR in the limitations and has selected the bolded limitation.

Claim 9
A debugger computer program product-for implementing enhanced graphical user interface functions as recited in claim 8 includes the step of identifying program load and unload events (Dbug, page 121, Step-Into), and dynamically updating said program loadmap for display as loadmap information changes responsive to program load and unload events (Dbug, update of display with Step operations is inherent and required).

Claim 10
A debugger computer program product for implementing enhanced graphical user interface functions as recited in claim 9 wherein the step of identifying program load and unload events includes the steps of setting breakpoints at program load and unload entry points in the program under debug (Dbug, page 108, bullet 7); and when debugging said program, identifying an unload breakpoint; and removing all information for an archive program being unloaded from said program loadmap to provide a current program loadmap, and displaying said current program loadmap. (Dbug, page 97, module unloaded).

Claim 11
A debugger computer program product for implementing enhanced graphical user interface functions as recited in claim 8 includes the step of identifying a user selected variable and identifying user selected fields of the variable to be displayed, and creating a custom record with the user selected fields. As per claim 5.

Claim 12
A debugger computer program product for implementing enhanced graphical user interface functions as recited in claim 11 includes the step responsive to a user selection of all variables of

this type to be customized, adding said created custom record to a custom type list for displaying user selected customized records for all variables of this type only with the user selected fields. As per claim 6.

Claim 13
A debugger computer program product for implementing enhanced graphical user interface functions as recited in claim 11 includes the step adding said created custom record to a variables list for displaying the variable only with the user selected fields. As per claim 7.

Claim 14
A debugger computer program product for implementing enhanced graphical user interface functions in a computer system, said debugger computer program product including instructions executed by the computer system to cause the computer system to perform the steps of:
 identifying a user selected variable and identifying user selected fields
of the variable to be displayed,
  creating a custom record with the user selected fields; and
  displaying the variable only with the user selected fields. As per claims 1 and 6.

Claim 15
A debugger computer program product for implementing enhanced graphical user interface functions as recited in claim 14 wherein the step of displaying the variable only with the user selected fields includes the step adding said created custom record to a variables list for displaying the variable only with the user selected fields. As per claim 3.

Claim 16
A debugger computer program product for implementing enhanced graphical user interface functions as recited in claim 14 includes the step of identifying a user selection of all variables of this type to be customized, adding said created custom record to a custom type list for displaying user selected customized records for all variables of this type only with the user selected fields. As per claim 6.

Claim 17
A method for implementing enhanced graphical user interface functions in a graphical debugger comprising the steps of:
 utilizing a loadmap display manager for implementing a loadmap
function and generating a program loadmap for a program under debug;
  displaying said generated program loadmap responsive to said
loadmap function;
  utilizing a custom record display manager for receiving user inputs
and implementing a custom record display function;
  displaying user selected customized records responsive to said
custom record display function. As per claim 1.

Claim 18

A method for implementing enhanced graphical user interface functions in a graphical debugger as recited in claim 17 wherein the step of utilizing a loadmap display manager for implementing a loadmap function and generating a program loadmap for a program under debug includes the steps of reading debug data for a program under debug; examining said program debug data, generating a list of each source and disassembly file contained in the program under debug, and

generating a list of each object or archive program bound to the program under debug at run time to generate said program loadmap for display; and displaying said generated program loadmap on a debugger graphical user interface. As per claim 1.

Examiner Note

Examiner notes the OR in the limitations and has selected the bolded limitation.

Claim 19

A method for implementing enhanced graphical user interface functions in a graphical debugger as recited in claim 18 includes the steps of identifying program load and unload events, dynamically updating said program loadmap and displaying said updated loadmap responsive to identified program load and unload events. As per claim 10.

Claim 20

A method for implementing enhanced graphical user interface functions in a graphical debugger as recited in claim 17 wherein the step of utilizing a custom record display manager for receiving user inputs and implementing a custom record display function includes the steps of identifying a user selected variable and identifying user selected fields of the variable to be displayed, creating a custom record with the user selected fields; and displaying the variable only with the user selected fields. As per claim 6.

Claim 21

A method for implementing enhanced graphical user interface functions in a graphical debugger as recited in claim 20 includes the steps of identifying a user selection of all variables of this type to be customized, adding said created custom record to a custom type list for displaying user selected customized records for all variables of this type only with the user selected fields. As per claim 7.
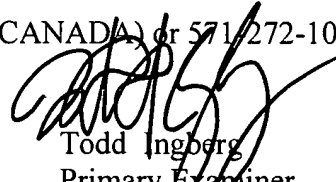
Correspondence Information

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Todd Ingberg whose telephone number is (571) 272-3723. The

examiner can normally be reached on during the work week..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

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applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Todd Ingberg
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TI